SR SUNTOUR

SERVICE MANUAL

Front drive system

Thank you for choosing SR SUNTOUR products. In order to maximize the shifting performance, please kindly read this instruction sheet carefully before starting to use the SR Suntour drive train.

Key features

- Double action front derailleur.
- Cable saver system Twist shifter.
- PowerFlo Front index shifting design chainwheel.

Front derailleur/shiftlever specifications

Front	Compatible ring	Compatible speed	Compatible shift lever
FD-XCR706	46/32/22T	27S	DSM-XCR61/71-DR, DSC-NCX60/70-DR, SL-DURO27E-L3
FD-XCR704/504	44/32/22T		DSM-XCR61/71-DR, DSC-NCX60/70-DR, SL-DURO27E-L3 SRAM, Shimano
FD-XCR502	42/32/22T		
FD-XCR508	48/38/28T		
FD-CR318			
FD-XCC312	42/32/22T		
FD-CR328	48/38/28T	24S	DSM-XCR51-DR, DSC-NCX50-DR, TS-NCX/CR500-L3, SRAM, Shimano
FD-XCC322	42/32/22T		
FD-XCC202			
FD-CR208	48/38/28T		
FD-XCC102	42/34/24T		SRAM, Shimano
FD-XR/TP17			
FD-XR/TP05	48/38/28T		

Chainwheel specifications

Chainwheel	Ring combination	Compatible BB
X-OFF series	32/22T	BB-X-OFF
Durolux series	46/32/22T , 44/32/22T , 32/22T	OCTALINK (BB-DUROLUX-113) or ISIS
XCR series	46/32/22T , 44/32/22T	ISIS (BB-XCR-113) or OCTALINK or Square MM110
DURO series	44/32/22T, 32/22T	ISIS (BB-XCR) or Square
XCC300 series	48/38/28T , 44/32/22T , 42/32/22T	Square (MM110)
NCX series	44/32/22T , 42/32/22T	Square (LL113)
CR series	48/38/28T	
NEX series		Square (122.5mm)
XCC150 / XR series	42/34/24T	
XCC100 series	48/38/28T	

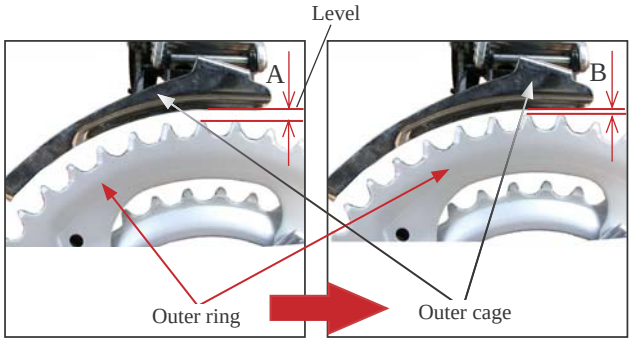
Chainwheel installation

Using the 8mm Allen wrench, install the chainwheel onto the bottom bracket axle. For such chainwheel models as NEX, XCC150/100 and XR series, please use the fixing bolts furnished with your bottom brackets.

Suggested tightening torque: Nut type: 45 - 55Nm (450- 550kgf/cm)
Bolt type: 35- 45Nm (350- 450kgf/cm)
Chainline tolerance is ±1.5mm.

Note: Above torque values apply in case of no grease on the B.B. axle taper.

Front derailleur installation



Front derailleur position

With the outer cage directly over and parallel to the outer chainring, be sure to adjust the clearance between the level section of the outer cage and outer chainring to be 1-3mm as shown [A]. For easier installation, first position the front derailleur on the smallest chainring temporarily, so that the clearance between the outer cage and outer chainring is about 1mm as shown [B].

NOTE (all Front derailleurs except for FD-XR/TP series)

Dual diameter compatible clamp design allows you to choose either 31.8 or 34.9mm seat tube. Before you install the front derailleur, check the seat tube diameter to have correct clamp. If it is 34.9mm, then remove the plastic adaptor from the clamp band.

Control installation

Insert the control to the handle bar as described below.

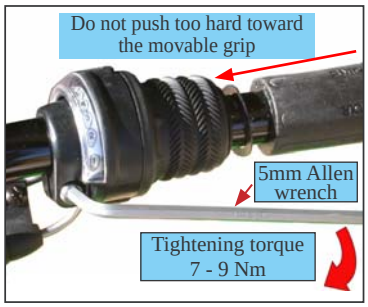
Note

*DSC type controls

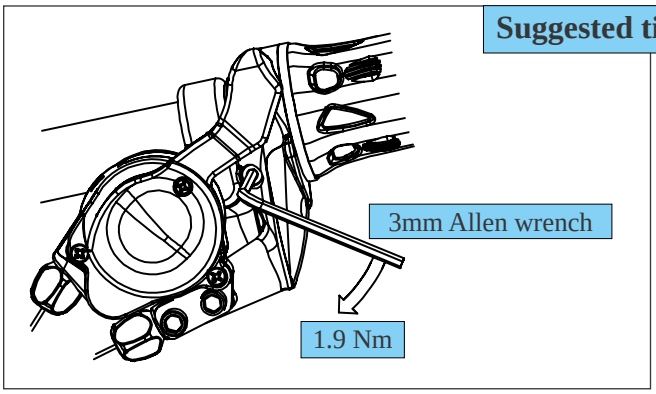
When using DSC type controls, please be sure to use the grip length that is more than 62mm for proper grip.

*TS type control

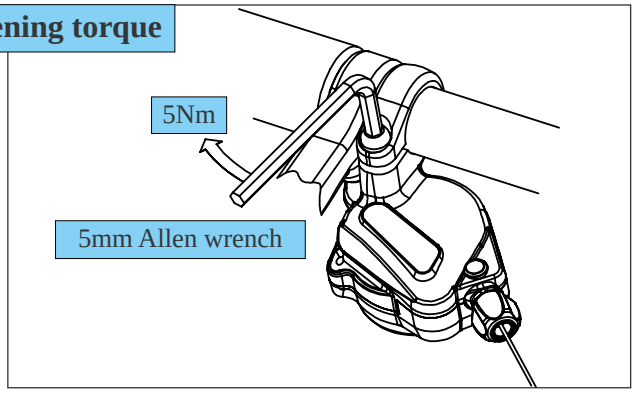
Before installing grips, be sure to put the 0.5mm slide washers between the controls and grips. After installing grips, adjust the position of the controls, making sure not to push them too hard against grips. Otherwise it may affect the shifting function and make the operation heavier.



Suggested tightening torque



DSM & DSC types

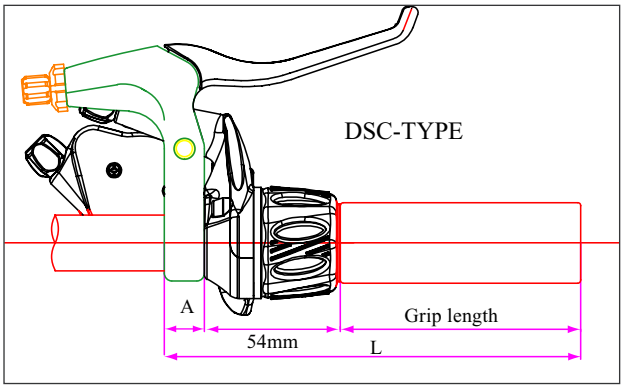


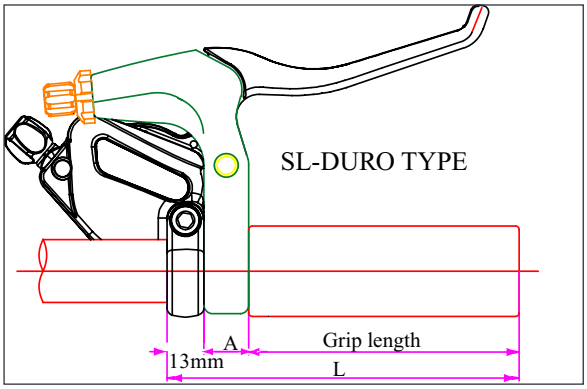
SL-DURO type

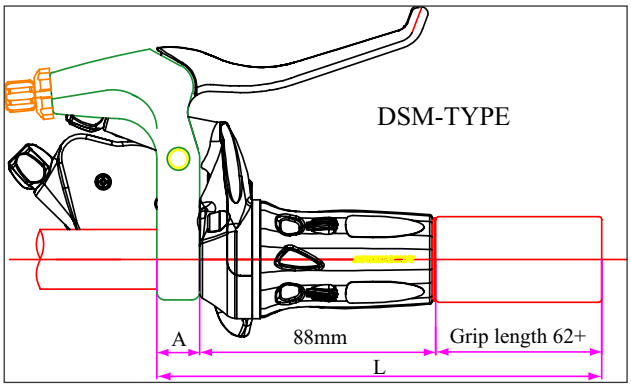
Handlebar dimension

When using the SR SUNTOUR Control, it is necessary to maintain straight section „L“ at the handlebar ends as shown below. Please select handlebars according to the dimensions shown here.

	Straight section on „L“
SL-DURO type	13mm + Brake bracket size (A) + Grip length
DSM type	Brake bracket size (A) + 54mm + Grip length
DSC type	Brake bracket size (A) + 88mm + B (should be more than 62mm)
TS type	72mm + Grip length







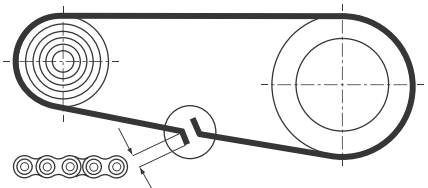
Chain length

In order to get maximum shifting performance, please follow the points below to determine the proper chain length.

Chainwheel: 42T, 44T, 46T or 48T outer ring

Rear largest sprocket: 30T or 32T

Add 4 links after putting the chain on the front and rear largest sprockets.

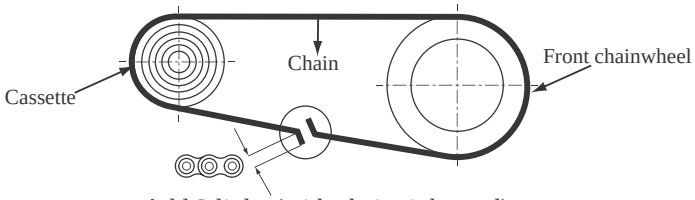


Add 4 links (with chain tightened)

Chainwheel: 42T, 44T, 46T or 48T outer ring

Rear largest sprocket: 34T

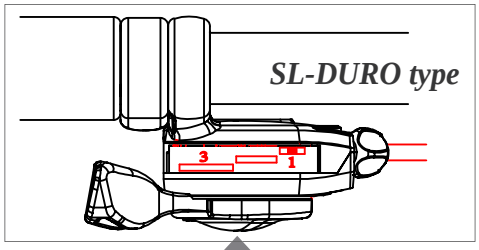
Add 2 links after putting the chain on the front and rear largest sprockets.



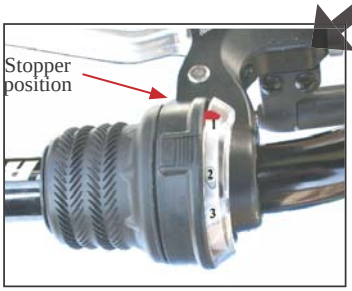
Add 2 links (with chain tightened)

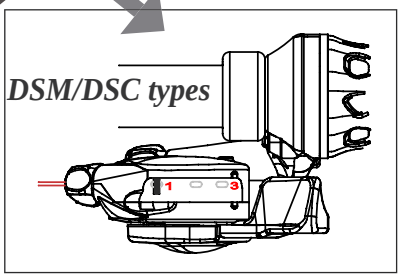
Inner cable connection

1. Set the control to the stopper position as shown in the indicator [1].
2. This Dual-pull system allows to have down-pull cable routing or top-pull cable routing. So choose the proper cable routing as shown here.
3. After taking up the initial slack of cable, connect the inner cable to the front derailleur.
4. Tighten the inner cable fixing bolt with a 5mm Allen wrench. Suggested tightening torque: 5-7 Nm.



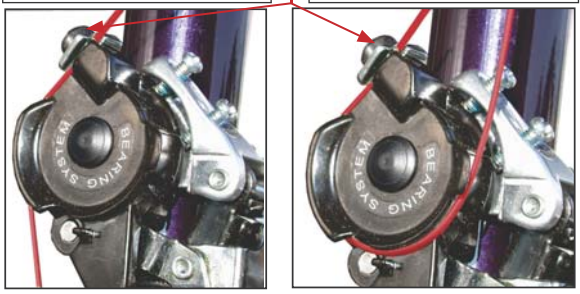
Front derailleur control at stopper positon





Inner cable fixing bolt

Down-pull cable connection | Top-pull cable connection



Index adjustment

1. Shifting range

Low adjustment

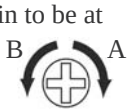
Turn the Low adjustment screw so that the clearance between the Inner plate and the chain is at 0.5-1.0mm.

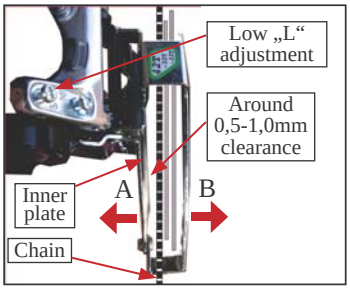
Center adjustment

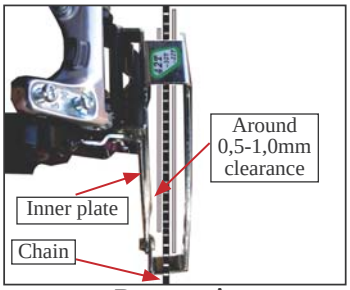
Set the chain onto the largest rear sprocket and center chainring. Adjust the position of the front derailleur, using the outer casing adjustment barrel on the control, so that the clerance between the Inner plate and the chain to be at around 0.5-1.0mm.

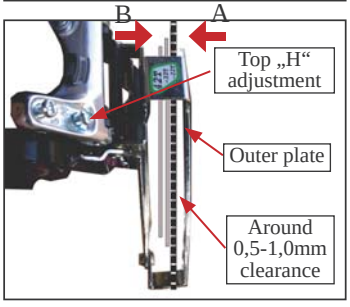
Top adjustment

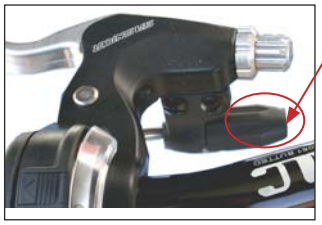
Turn the Top adjustment screw so that the clearance between the Outer plate and the chain to be at 0.5-1.0mm.

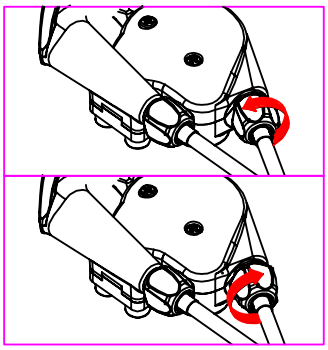




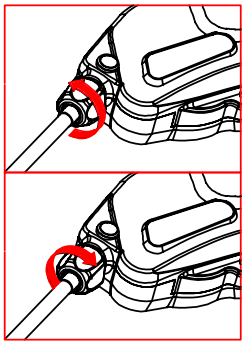








DSM/DSC types



SL-DURO type

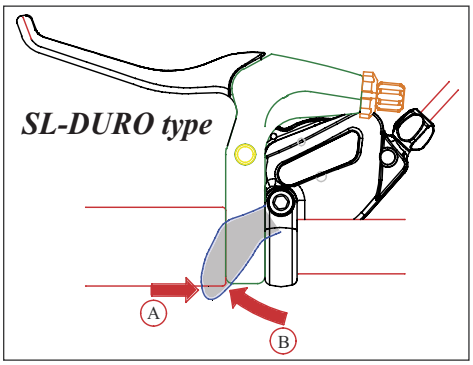
2. Troubleshooting of the adjustment

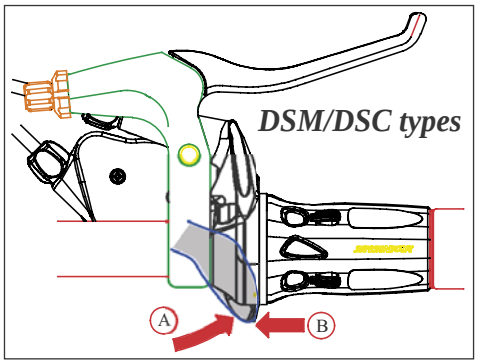
10. After completing the above steps, move the shift lever to see the shifting performance.

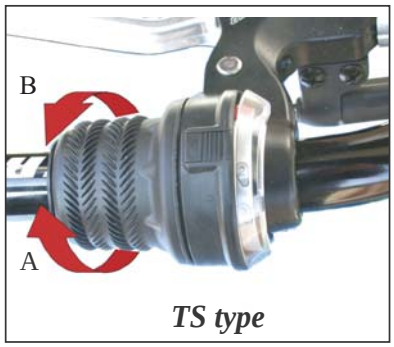
If shifting from the smallest chainring to the center ring is difficult.	Turn the outer casing adjustment barrel on the control counter-clockwise (about 1/4 turns).
If shifting from the center chainring to the outer ring is difficult.	Turn the top adjustment screw on the front derailleur counter-clockwise (about 1/4 turns).
If the chain falls to the crank side.	Turn the top adjustment screw on the front derailleur clockwise (about 1/4 turns).
If shifting from the outer chainring to the center ring is difficult.	Turn the outer casing adjustment barrel on the control clockwise (about 1/4 turns).
If shifting from the center chainring to the smallest ring is difficult.	Turn the low adjustment screw on the front derailleur counter-clockwise (about 1/4 turns).
If the chain falls to the bottom bracket side.	Turn the low adjustment screw on the front derailleur clockwise (about 1/4 turns).
When the chain is on the center chainring, if there is interference between the chain and front derailleur outer plate when shifted to the smallest sprocket and interference between the chain and front derailleur inner plate when shifted to the largest sprocket.	The level section of the outer plate should be directly above and parallel to the largest chainring.

Control operation

When operating the controls, always be sure to turn the crank arm at the same time.
Rotate the movable grip to the (A) direction to shift from smaller chainring to a larger ring and to the (B) direction to shift from a larger chainring to a smaller ring.

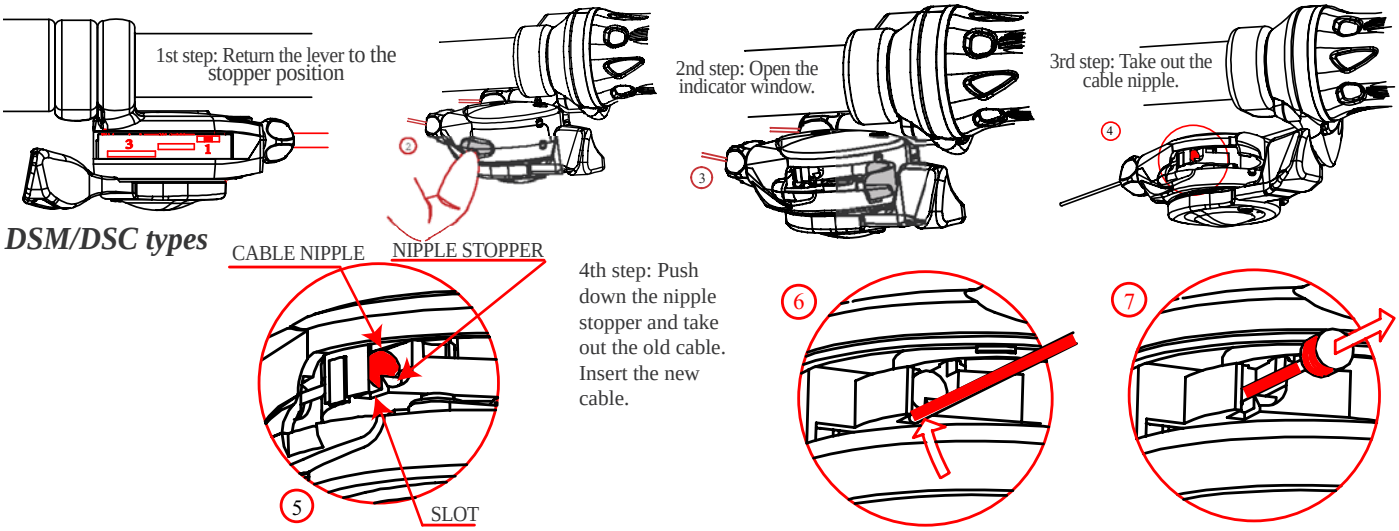






Replacing the inner cable

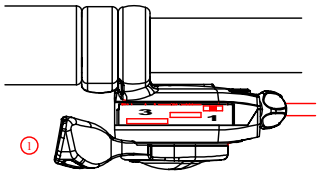
1. Return the control to stopper position.
2. Open the indicator window by a finger or a screw driver (-). (For TS type: Loosen the cap screw counter-clockwise with a 2.5mm allen wrench.)
3. Push out the old inner cable, and install the new inner cable. At this time, check to see if the control is at the stopper position.
4. Close the indicator window. (For TS type: Tighten the cap screw clockwise with a 2.5mm allen wrench. Suggested tightening torque is 0.05Nm. Then close the cable replacement port.)


1st step: Return the lever to the stopper position
2nd step: Open the indicator window.
3rd step: Take out the cable nipple.
DSM/DSC types
CABLE NIPPLE
NIPPLE STOPPER
SLOT
4th step: Push down the nipple stopper and take out the old cable. Insert the new cable.

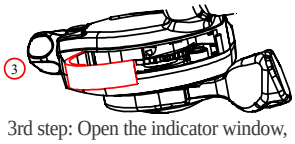
Replacing the inner cable

1. Return the control to stopper position.
2. Open the indicator window by a finger or a screw driver (-). (For TS type: Loosen the cap screw counter-clockwise with a 2.5mm allen wrench.)
3. Push out the old inner cable, and install the new inner cable. At this time, check to see if the control is at the stopper position.
4. Close the indicator window. (For TS type: Tighten the cap screw clockwise with a 2.5mm allen wrench.
Suggested tightening torque is 0.05Nm. Then close the cable replacement port.)

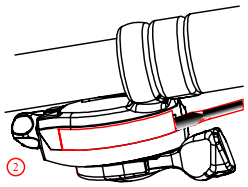
SL-DURO type



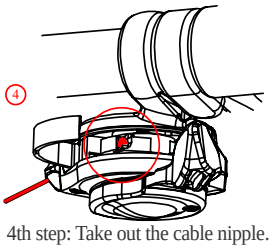
1st step: Return the lever to the stopper position



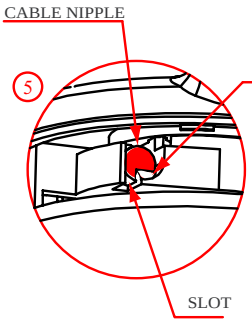
3rd step: Open the indicator window,



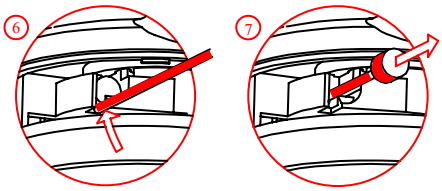
2nd step: Open the indicator window, using a flat screwdriver.



4th step: Take out the cable nipple.



5th step: Push down the nipple stopper, in order to release the cable nipple - take out the old cable.



LIMITED WARRANTY

SR SUNTOUR warrants the drive train to be free from defects in materials and workmanship under normal use for a period of two years from the date of purchase. In no event shall this limited warranty apply to any defect of the drive train caused by: improper installation, disassembly, reassembly, intentional breakage or damage, alterations or modifications to the drive train by the user or other party or any unreasonable use or abuse of the product or any use for which this product was not intended.
The obligation of this limited warranty shall be limited to repairing or replacing the drive train or any part for which there is a defect in materials or workmanship during the two years following the date of purchase. To validate this limited warranty the purchaser must submit this warranty card to SR SUNTOUR within 30 days after purchase of the drive train. Any alteration of, or tampering with the warranty card automatically terminates this limited warranty.
SR SUNTOUR makes no express or implied warranties of fitness or merchatability of any kind, except as set forth above. SR SUNTOUR's liability hereunder is expressly limited to repair or replacement of the product. Under no circumstances will SR SUNTOUR be liable for incidental or consequential damages. Some jurisdictions do not allow the exclusion or limitation of liability of incidental or consequential damages, so the above exclusion may not apply to you. This warranty gives you specific rights and you may have other rights which vary from jurisdiction to jurisdiction.

Drive Train Warranty Card:

Date of purchase: _____ Model name _____

Term of limited warranty: Two years from the date of purchase

Dealer Name: _____ Phone#: _____

Address: _____

Purchaser Name: _____ Phone#: _____

Address: _____

This warranty is void without proof of purchase.

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